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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,449	06/01/2006	Peter Huntemann	291257US0PCT	2170

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1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

KASHNIKOW, ERIK

ART UNIT	PAPER NUMBER
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1782

NOTIFICATION DATE	DELIVERY MODE
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05/26/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/581,449	Applicant(s) HUNTEMANN ET AL.	
	Examiner ERIK KASHNIKOW	Art Unit 1782	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grimm et al. (6,387,447) in view of Sano et al. (JP 59-197466).

3. Grimm et al. teach coatings for offshore pipes (column 2 lines 5-10).

4. In regards to claims 11 and 13 Grimm et al. teach that the coating for the pipes comprises polyurethane formed from an isocyanate compound, hollow microbeads, as well as a polyol (OH number 36) and castor oil component (example 1) .

5. In regards to claim 12 Grimm et al. teach the addition of diethylene glycol to the mixture for forming the polyurethane (example 1).

6. In regards to claim 15 Grimm et al. teach a coating thickness of 45mm for the polyurethane layer (column 4 line 25).

7. In regards to claim 16 Grimm et al. teach the process for forming the offshore pipe (column 3 line 31 to column 4 line 32).

8. While Grimm et al. teach the pipe and the process for making the pipe as discussed above they are silent regarding Applicant's desired concentrations and viscosity.

9. Sano et al. teach a coating for metal for use in an underwater environment (page 3 lines 4-7) wherein the metal is coated by a polyurethane coating (page 2 claims section).

10. In regards to claims 11 and 17-20 Sano et al. teach that the polymeric elastomers can be polyurethane. Sano et al. teach that the polyurethane can be formed from a mixture that includes a polyisocyanate, castor oil and a polyol (page 2 claims section, page 6 last paragraph). Sano et al. teaches that the castor oil be present at concentrations of 0-90 percent by weight which overlaps with applicant's ranges (page 5 last paragraph page 7 second to last paragraph). While Sano et al. are silent with regards to the term polyetherpolyol, one of ordinary skill in the art would recognize that the combination of the at least 2 hydroxyl containing group and the two amino groups would result in a polyether polyol, and Sano further teaches a hydroxyl number of 120 or greater (page 6 first paragraph).

11. In regards to claim 21 as Grimm et al, and Sano et al. teach the same materials in the instantly claimed concentrations they would necessarily have the same hydrolytic stability. It is further noted that Sano et al. reference specifically mention that the coating of the invention is for pipes (page 10 second paragraphs) and further that the coating of their invention have improved water resistant properties (top of page 4 and page 10 third paragraph).

12. In regards to claim 14 absent a showing of criticality with respect to "viscosity" (a result effective variable), it would have been obvious to a person of ordinary skill in the art at the time of the invention to adjust the "viscosity" through routine experimentation

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to values, including those presently claimed, in order to achieve "an optimal viscosity of the reactive mixture which allows for effective coating of the pipe". It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

13. One of ordinary skill in the art at the time of the invention would be motivated to modify the coated pipes of Grimm et al. with the polymer of Sano et al, because the pipe of Grimm et al. which are able to withstand pressures of 50 bar and temperatures above 120°C would benefit from excellent corrosion-proofness, water resistance and insulating properties of the coating of Sano et al (page 10 third paragraph).

14. Claims 11-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sano et al. (JP 59-197466) in view of Grimm et al. (6,387,447).

15. Sano et al. teach a coating for metal for use in an underwater environment (page 3 lines 4-7) wherein the metal is coated by a polyurethane coating (page 2 claims section).

16. In regards to claims 11, 13 and 17-20 Sano et al. teach that the polymeric elastomers can be polyurethane. Sano et al. teach that the polyurethane can be formed from a mixture that includes a polyisocyanate, castor oil and a polyol (page 2 claims section, page 6 last paragraph). Sano et al. teaches that the castor oil be present at concentrations of 0-90 percent by weight which overlaps with applicant's ranges (page 5 last paragraph page 7 second to last paragraph). While Sano et al. are silent with regards to the term polyetherpolyol, one of ordinary skill in the art would recognize that

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the combination of the at least 2 hydroxyl containing group and the two amino groups would result in a polyether polyol, and Sano further teaches a hydroxyl number of 120 or greater (page 6 first paragraph).

17. In regards to claim 15 it is noted that Sano et al. teach that the coating is applied relatively thickly, at least 1 and preferably at least 3 mm but does not give an upper limit (examples and top of page 10).

18. As noted above Sano et al. teach a coating for a metal pipe that has increased water resistance however they are silent with regards to the pipe being an underwater pipe, process for forming said pipe as well as the use of microbeads.

19. Grimm et al. teach coatings for offshore pipes (column 2 lines 5-10).

20. In regards to claims 11 and 13 Grimm et al. teach that the coating for the pipes comprises polyurethane formed from an isocyanate compound, hollow microbeads, as well as a polyol (OH number 36) and castor oil component (example 1) .

21. In regards to claim 12 Grimm et al. teach the addition of diethylene glycol to the mixture for forming the polyurethane (example 1).

22. In regards to claim 15 Grimm et al. teach a coating thickness of 45mm for the polyurethane layer (column 4 line 25).

23. In regards to claim 16 Grimm et al. teach the process for forming the offshore pipe (column 3 line 31 to column 4 line 32).

24. While Grimm et al. and Sano et al. teach the pipe and the process for making the pipe as discussed above they are silent regarding Applicant's desired concentrations and viscosity.

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25. In regards to claim 14 absent a showing of criticality with respect to "viscosity" (a result effective variable), it would have been obvious to a person of ordinary skill in the art at the time of the invention to adjust the "viscosity" through routine experimentation to values, including those presently claimed, in order to achieve "an optimal viscosity of the reactive mixture which allows for effective coating of the pipe". It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

26. In regards to claim 21 as Grimm et al, and Sano et al. teach the same materials in the instantly claimed concentrations they would necessarily have the same hydrolytic stability. It is further noted that Sano et al. reference specifically mention that the coating of the invention is for pipes (page 10 second paragraphs) and further that the coating of their invention have improved water resistant properties (top of page 4 and page 10 third paragraph).

27. One of ordinary skill in the art at the time of the invention would be motivated to modify the coating of Sano, which offers excellent corrosion-proofness, water resistance and insulating properties (page 10 third paragraph), with the coated pipes of Grimm et al. because the coating and pipes of Grimm et al. offer the ability able to withstand pressures of 50 bar and temperatures above 120°C.

Response to Arguments

In response to applicants arguments a human translation of the foreign document has been provided and the rejection adjusted to further show where the reference specifically teaches the limitations.

In regards to applicants argument that there not a suggestion of hydrolytic stability the examiner respectfully disagrees and points to page 10 3rd paragraph and tables 2 and 3 of Sano et al. which teaches water resistance and as such water stability.

It is further noted that tables 2 and 3 show how the invention of Sano et al. improves the water absorption rate, and as such while the declaration was considered it was not found persuasive.

With regards to the arguments regarding the Grimm reference it is noted that “the arguments of counsel cannot take the place of evidence in the record”, *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the examiner’s position that the arguments provided by the applicant regarding the heat properties of the polyurethanes of Grimm and Sano must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), “the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001”.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIK KASHNIKOW whose telephone number is (571)270-3475. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (Second Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Erik Kashnikow
Examiner
Art Unit 1782

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1782